6. Optimize

Program Name: Optimize.java Input File: optimize.dat

You have been hired by Home Depot, and they want help deciding the optimal pipe lengths to sell. Long pipes come in to the store from the wholesaler, and are cut to different lengths, before the pieces are sold. Different pipe lengths are worth different amounts of profit. Your job is to decide how to maximize profit by deciding how to cut up the long pipe.

Input
The first line will contain T, the number of test cases to follow. T pairs of lines will follow. The first line will contain a list of space separated numbers. The first number is the profit obtained from a pipe of length 1 foot, the second from a length of 2 feet, etc. The next line will contain a single integer L, stating the length of pipe in feet that you will start with.

Constraints
$0 < T < 20$
$0 < L < 300$

Output
Your output will be a single integer. The integer will be the maximum profit that can be obtained from the given pipe.

Example Input File
```
2
1 4 2 3
4
1 2 3
8
```

Example Output to Screen
```
8
8
```

Explanation
For the first testcase, the most profit is made by dividing the 4-foot pipe into 2 pieces, each 2 feet long.
For the second case, the 8-foot pipe should be cut into 3 pieces, of 2-foot, 3-foot and 3-foot respectively.